

Functional Annex C:
VIRGINIA DEPARTMENT OF TRANSPORTATION
VIRGINIA STATE POLICE
VIRGINIA ARMY NATIONAL GUARD

HAMPTON ROADS HURRICANE TRAFFIC CONTROL PLAN

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## **HAMPTON ROADS HURRICANE TRAFFIC CONTROL PLAN**

### **I. Authority**

This plan has been prepared in accordance with the Commonwealth of Virginia Emergency Operations Plan (COVEOP) and the Virginia Department of Transportation (VDOT) Emergency Operations Plan. This plan will only be implemented upon order by the Governor of Virginia.

### **II. Reference**

Annex I-FF to Volume II, Virginia Hurricane Emergency Response Plan (HERP), to the COVEOP.

### **III. Purpose**

To provide a framework for use by local emergency service coordinators, state and local police and/or other agencies and groups involved in planning, coordinating and executing an evacuation of the Hampton Roads area.

To assign specific VDOT, Virginia State Police (VSP) and Virginia Army National Guard (VaARNG) roles and responsibilities in order to maximize outbound traffic flow in the event of an evacuation in the Hampton Roads area.

### **IV. Scope**

This plan establishes the traffic control concept, specifies mandatory tasks and provides the basis for coordinating those tasks expected to be accomplished by VDOT, VSP, and VaARNG external agencies and organizations.

### **V. Situation**

This plan design is based on a major hurricane disaster potential. Using data reported in the Technical Data Report of the Virginia Hurricane Study (TDR), it is projected that nearly three quarters of a million people will be at risk and need to evacuate their homes. This population has the potential to generate nearly 300,000 vehicles, all of which are carrying citizens seeking other shelter.

A traffic evacuation of the Hampton Roads area will be difficult. More than 27 hours will be needed to completely evacuate potential traffic volumes generated by the "at

risk" population. The "at risk" population includes residents of the immediate coastal areas, residents in low-lying areas prone to flooding and any resident of a mobile home.

In less severe storms, smaller populations (including tourists) or partial evacuations will be easier and may require less time to evacuate. Nevertheless, the tenets of this plan will be in effect for smaller evacuations as well.

This plan has been designed to be implemented in part or in total to accommodate traffic demand.

## **VI. Assumptions**

Because of the many variables that may affect a storm's tracking, size, intensity and forward speed, sufficient advanced warning time may not be available to completely evacuate the total "at risk" population.

In order to gain the maximum benefit of this traffic control plan, the order to evacuate must be made no less than 24 hours before the projected onset of tropical storm force winds (34-knots/39 mph).

This plan assumes high seasonal population (tourist) and slow public response to an evacuation order. However, it is assumed that the general public will cooperate with local authorities by following instructions.

## **VII. Mission**

The Departments of Transportation and State Police with the Virginia Army National Guard and local governments will implement this plan at the direction of the Governor, with primary emphasis on fostering a safe environment for evacuation. Secondly, all assigned personnel will concentrate their efforts on ensuring that the maximum traffic flow is maintained at all times. Our goal is to facilitate a safe and effective evacuation prior to the arrival of dangerous weather conditions.

## **VIII. Organization & Control**

### **A. VDOT**

VDOT has established a traffic management center (otherwise known as the Smart Traffic Center – STC) off Indian River Road in Virginia Beach (alternate site is the VDOT Hampton Roads District Office). In the event of a hurricane evacuation, the STC will be staffed by VDOT personnel and may be augmented, as necessary, by liaisons from the Virginia Department of Emergency Management, the Virginia State

Police (VSP), as well as local police and local emergency services coordinators. Primary and back-up communications will be established between the STC, state EOC, VDOT EOC, state and local law enforcement, and all affected local emergency service coordinators. During an evacuation, traffic control and any adjustments to this Plan will be managed and directed by the STC.

#### **B. VSP**

The Commanding Officer of the Fifth Division shall bear overall responsibility for the execution of this plan. The Division Five Field Lieutenant will supervise this operation and will coordinate with the Division One Field Lieutenant. Each affected First Sergeant will be held accountable for operations within his/her Area. For the purposes of communication, all essential information will be directed to the Division Five Field Lieutenant so that he/she may effectively coordinate all necessary resources.

Coordination between VSP and local law enforcement agencies will be the responsibility of each Area First Sergeant or his/her designee.

The Division Five Field Lieutenant will maintain ongoing communication with the North Carolina Highway Patrol (NCHP) and Chesapeake Police Department (CPD) to ensure that the evacuees from North Carolina do not unduly interfere with this operation. If the Route 168 corridor becomes congested, the Division Five Field Lieutenant will contact NCHP and CPD in order to require that the Barco Diversion Plan (described in Coordinating Instructions Section A) be implemented. Route 168 will continue to be monitored (as agreed by CPD) during the Barco diversion. Once the queue is cleared, the North Carolina evacuation traffic flow will be restored in conjunction with NCHP and CPD.

During the execution of this plan, all affected Area First Sergeants (in Division One and Division Five) will maintain ongoing communication with their Division's Field Lieutenant in order to provide continuous traffic flow reports.

### **IX. Concept of Operations**

The transportation plan used for evacuation within the Hampton Roads area must be easily communicated and understood, simple to execute and designed to safely maximize outbound roadway capacity. To this end, all appropriate outbound roadways will be used. Site-specific traffic control enhancements will be implemented to modify critical roadway intersections.

**All interstate maintenance and construction activities, which reduce capacity of the roadway, will be suspended throughout any evacuation period.**

In addition, utilization of the transportation network as a whole must be balanced and demand, to the extent possible, must be safely spread over all available outbound routes. In an effort to avoid over-saturation of outbound interstate evacuation routes, the traffic control plan employs two fundamental concepts. First, an evacuation must be conducted in two distinct, but overlapping phases with plans in place for a possible I-64 lane reversal:

- Phase One will consist primarily of the evacuation of populations deemed most “at risk” in the cities of Hampton, Poquoson, Virginia Beach and Norfolk, as well as the counties of York, the Middle Peninsula (Mathews, Gloucester and Middlesex) and the Northern Neck (Northumberland, Westmorland, Lancaster and Richmond).
- Phase Two will consist primarily of the evacuations of secondary “at risk” populations of the Peninsula including Newport News, the remainder of Hampton, as well as the Southside cities of Chesapeake, Portsmouth and Suffolk.
- This Hurricane Traffic Control Plan has been designed to set the stage for an I-64 lane reversal and will easily segue into implementation of the same. To assist in the evacuation, the plan includes an outline for using all interstate lanes west of the Hampton Roads Bridge Tunnel flowing in an outbound direction towards I-295 in Richmond.

Secondly, traffic must be metered onto the interstate system in order to smooth flow and help prevent over-saturation. Ramp metering will minimize the time necessary for vehicles to clear the Hampton Roads region once on the interstate system. Some ramps may be closed. Access to closed ramps will be limited to use by emergency vehicles only.

- A. **PHASE ONE** – Implemented at least 24 and no later than 14 hours prior to the onset of tropical storm force winds (see Annex A).

When instructed, populations are encouraged to evacuate as follows:

1. Virginia Beach



Individuals residing north of I-264 (Virginia Beach-Norfolk Expressway) are encouraged to use I-64 West Outer Loop toward Richmond.

Individuals residing south of I-264 (Virginia Beach-Norfolk Expressway) are encouraged to use I-64 East Inner Loop toward Suffolk.

## 2. Norfolk

Individuals residing east of I-64 are encouraged to use I-64 West Outer Loop towards Richmond.

Individuals residing west of I-64 are encouraged to use I-64 East Inner Loop and I-264 West toward Suffolk.

There is no access to I-64 from Chesapeake Blvd.

## 3. Hampton

Individuals residing in the area east of King Street (Rte. 278) and north of Pembroke Avenue (Rte. 351) are encouraged to use I-64 West toward Richmond (there is access to I-64 West from LaSalle Avenue, I-664 and Mercury Blvd).

There is no access to I-64 West at Mallory Street or Settlers Landing Road.

Individuals residing east of King Street and south of Pembroke Avenue (including Fort Monroe) will use Mercury Boulevard/Route 258 South (James River Bridge) to Route 258/32 in Isle of Wight, or Route 143 West to Route 199 (around Williamsburg) to Route 60 West.

Individuals residing north of Mercury Boulevard, will take Magruder Boulevard and use Route 17 North (crossing over the Coleman Bridge) toward Fredericksburg.

Langle AFB will evacuate out of their west gate toward Magruder Boulevard South, to I-64 East, and will then use Route 258 South (Mercury Boulevard to James River Bridge) to their evacuation assembly area at the Ft. Pickett Army Barracks.

## 4. York County and Poquoson

Residents are encouraged to use Route 17 North (George Washington Highway) toward Fredericksburg.

Residents may also use Route 171 (Victory Boulevard) to I-64 West toward Richmond.

5. Middle Peninsula

Individuals residing on the Middle Peninsula are encouraged to evacuate along Route 17 North.

6. Northern Neck

Individuals residing on the Northern Neck are encouraged to evacuate toward Fredericksburg (along Route 17).

7. Eastern Shore

All residents of Northampton and Accomack counties are encouraged to use Route 13 North as an evacuation route.

**B. PHASE TWO** – Implemented at least 14 hours prior to the onset of tropical storm force winds until the evacuation is terminated (see Annex B).

When instructed, populations are encouraged to evacuate as follows:

1. Portsmouth

Individuals residing north of I-264 are encouraged to use Route 17 North to Route 258/32 South in Isle of Wight County, and Routes 337 West and 664 North to 17 North then to Route 10 West toward Smithfield.

Individuals residing south of I-264 are encouraged to use Route 58 (Airline Blvd.) to Route 58/460 West toward Suffolk.

2. Chesapeake

All residents are encouraged to use I-64 East Inner Loop or I-264 West to Route 58/460 West toward Suffolk or Route 17 North to Route 258/32 to Route 10 West toward Smithfield.

3. Suffolk

Residents north of Route 125 (Kings Highway) are encouraged to use Route 17 North, to Route 258/32 to Route 10 West toward Smithfield.

#### 4. Newport News

Residents are encouraged to use Route 143 West (Jefferson Avenue) to Route 199 (around Williamsburg), to Route 60 West or Route 258 South across the James River Bridge to Route 258/32 in Isle of Wight.

#### 5. Hampton

Individuals residing west of King Street and south of Mercury Boulevard are encouraged to use I-64 West toward Richmond (there is access to I-64 West from LaSalle Avenue, I-664 and Mercury Blvd) or Route 17 North (crossing over the Coleman Bridge) toward Fredericksburg.

There is no access to I-64 West at Mallory Street or Settlers Landing Road.

Individuals residing west of Armistead Avenue and north of Mercury Boulevard are encouraged to use Route 17 North (crossing over the Coleman Bridge) toward Fredericksburg.

### **C. I-64 Reversal**

The Governor has authorized the Virginia Department of Emergency Management to develop an evacuation plan using all interstate lanes west of the Hampton Roads Bridge Tunnel flowing in an outbound direction toward I-295 in Richmond. This Hurricane Traffic Control Plan has been designed to set the stage for an I-64 lane reversal and will easily segue into implementation of the same.

Once the order is given to execute this plan, Virginia State Police First Division personnel will shut down the eastbound lanes of Interstate 64 to all traffic as soon as possible. This action will serve to reduce the number of vehicles that will need to be shunted off the Interstate prior to the sweep. Once all interchanges report that sufficient personnel are in place to control traffic, all remaining traffic on the eastbound lanes of Interstate 64 will be directed off at the next exit. The personnel at each interchange will ensure that no traffic, for any reason, gets past their assigned interchange. Each interchange will ensure that the eastbound lanes are clear of all traffic, disabled vehicles, and obstructions. Once all interchanges report that their roadway is clear, the aerial inspection will begin, originating from the Richmond area. If the aircraft is not able to fly, the sweep will be conducted by two VSP marked cars, originating from the Richmond area.

Once the aerial inspection (or vehicle sweep) is completed, two VSP marked cars, with emergency lighting activated, will proceed westbound from the HRBT in the eastbound lanes of travel at a speed of 55 mph. The lead vehicles will coordinate their movements to ensure that traffic does not pass them. The VSP aircraft, if able to fly, will fly overhead to warn of any oncoming traffic. The VSP aircraft will communicate on the local radio channel, not the tactical channel, to ensure communication with any local ground units in a position to stop any vehicles traveling against the reversed traffic flow. Traffic control measures, deemed necessary in order to affect an I-64 reversal, have been incorporated as an appendix to this plan (as shown in Annex E).

Westbound traffic on the south side of the Hampton Roads Bridge Tunnel (HRBT) will be diverted to the eastbound lanes of travel in the vicinity of the 4<sup>th</sup> View on ramp. The median at this location is paved and capable of supporting a high-speed transition (35+mph). This transition will be accomplished on the south side of the HRBT because the transition can be accomplished at a higher speed than is possible on the north side of the HRBT, according to the VDOT planners. Only traffic entering the westbound lanes of I-64 at 4<sup>th</sup> View will be allowed to use the westbound tube.

The reversal plan requires that the South Hampton Roads evacuation traffic travels on the reversed roadway. This allows the Peninsula traffic to gain access to the interstate using the normal ramp configurations. The primary benefit here is that we will not need to direct traffic against the normal flow patterns and that additional signing will not be necessary. This will, of course, decrease the level of confusion in the minds of the public on the Peninsula.

The reversed traffic will continue westbound to the end of the reversal at Interstate 295. The eastbound lanes (westbound traffic flow) will be diverted back onto the westbound lanes of travel but will not be able to access Interstate 295 northbound or southbound. The traffic that had previously been on the westbound lanes of travel will have access to Interstate 295 northbound and southbound.

## **X. Responsibilities/Tasks**

### **A. VDOT Central Office - TEOC**

Coordinate the evacuation with affected state agencies; arrange assistance from other districts, as requested.

Coordinate with the US Coast Guard on the lock down of all bridges regionally.

Coordinate with bordering states.

Attempt to minimize the evacuation of other states, principally from North Carolina, into the Hampton Roads area; coordinate with Maryland DOT for an anticipated influx into that area from the Eastern Shore.

B. Richmond District/VSP Division 1

1. Sandston Residency/VSP Areas 1 and 3

Monitor traffic flow\* along I-64 West and Route 60 West. Be prepared to implement necessary traffic enhancements; deploying traffic control devices particularly at the I-295 and I-95 interchanges.

VDOT will assist law enforcement in order to help remove stalled vehicles from the travel roadway and shoulders, and provide motorist assistance where possible.

2. Petersburg Residency/VSP Areas 7 and 8

Monitor traffic flow\* along Route 460 West. Be prepared to implement necessary traffic enhancements, particularly at the I-295 and I-95 interchanges.

VDOT will assist law enforcement representatives by providing Safety Service Patrols. These patrol vehicles should be equipped with gas, water, tow cables, cushioned bumpers, radio, cellular telephone, etc. in order to help police remove stalled vehicles from the travel roadway and shoulders, and provide motorist assistance where possible.

C. Fredericksburg District/VSP Division 1

Coordinate the evacuation of residents of the Middle Peninsula and Northern Neck areas with local and state police and local emergency service coordinators.

Monitor traffic flow\* into the Fredericksburg District. Be prepared to assist with traffic enhancements and law enforcement, particularly along Routes 17 North, 360 West, 3 North and any other designated primary evacuation routes.

D. Hampton Roads District/VSP Division 5

Assume overall responsibility for the traffic evacuation of the Hampton Roads area.

Coordinate with state police in assigning law enforcement personnel to all links along interstate and primary evacuation routes, so as to provide immediate response to incidents.

Notify Hampton Roads local governments and establish communications.

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\* Will involve patrolling critical roadway sections, observing and reporting vehicle speeds, approximate travel times, as well as incident types and locations.

#### E. All Hampton Roads Residencies

Maintain 24-hour operations from the beginning of any evacuation through the implementation of any recovery plan.

Coordinate with local law enforcement, as required, to modify key roadway sections as directed below.

Arrange to have stand-by on-site recovery vehicles at all critical roadway sections.

Designate service patrol (pick-ups) to ride the shoulders along evacuation routes. These vehicles should be equipped with gas, tow cables, push bumpers, etc. to provide motorist assistance where possible.

##### 1. Accomac Residency/VSP Area 31

If an evacuation is ordered for either Northampton or Accomack Counties, take appropriate action (implement traffic control devices, adjust signal timings, etc.) to maximize northbound flow of traffic along Route 13.

Report to the Smart Traffic Center when lock down is complete on all drawbridges.

##### 2. Franklin Residency/VSP Area 34

Monitor traffic flow\* on Routes 58 and 460. Be prepared to implement traffic enhancements, as necessary; particularly at intersections, to maximize westbound traffic flow.

##### 3. Norfolk Residency/VSP Areas 32 and 47

Execute the modification to critical interchanges as described in Annex C.

Report to the Smart Traffic Center when lock down is complete on the High Rise Bridge (I-64 in Chesapeake).

4. Waverly Residency/VSP Area 36

Monitor traffic flow\* on Routes 10, 17, 58, 460, 258/32 and I-95. Be prepared to

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\* Will involve patrolling critical roadway sections, observing and reporting vehicle speeds, approximate travel times, as well as incident types and locations.

implement traffic control to facilitate traffic flow, particularly at intersections to maximize westbound and southbound traffic, respectively.

5. Williamsburg Residency/VSP Area 37

Be prepared to execute modifications to critical interchanges as deemed necessary.

Monitor traffic flow\* along I-64, Route 17, Route 143, Route 199 and Route 60. Be prepared to implement traffic enhancements as necessary, particularly at intersections to maximize westbound traffic flow.

6. Hampton Roads Tunnel Facilities (ERT, HRBT, MMBT)/VSP Area 46

Monitor and maintain essential services at all bridges/tunnels to include power distribution systems, emergency generators, pumps, fans and tunnel lighting.

The eastbound tunnel of the Hampton Roads Bridge Tunnel (I-64) will be closed to all traffic during Phase One of an evacuation. Motorists traveling on I-64 East will be diverted at I-664 toward the Monitor Merrimac Memorial Bridge Tunnel heading south.

The Monitor Merrimac Memorial Bridge Tunnel (I-664) will be closed to northbound traffic during Phase One of an evacuation.

Report to the Smart Traffic Center when lock down on the Coleman, Berkley, and James River Bridges is complete.

Monitor and activate flood gates, as required.

7. Jamestown Scotland Ferry/VSP Areas 36 and 37

Follow guidelines as set forth in the Hurricane Response Plan, which is governed by the Captain of the Port of Hampton Roads.

8. Smart Traffic Center/ VSP Area 32

Establish primary and back-up communications with the state EOC, VDOT EOC,

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\* Will involve patrolling critical roadway sections, observing and reporting vehicle speeds, approximate travel times, as well as incident types and locations.

state and local law enforcement, and all affected local emergency service coordinators.

Manage and direct traffic control and any adjustments to this Plan.

Relay information to the public by maintaining contact with local media outlets.

Assist law enforcement representatives by providing Safety Service Patrols (SSP). The vehicles should be equipped with gas, water, tow cables, cushioned bumpers, radios, cellular telephones, etc. to help emergency personnel remove stalled vehicles from travel roadways and shoulders and provide motorist assistance when possible.

## **XI. Coordinating Instructions**

### **A. Barco Diversion Plan**

The Barco Diversion Plan is an agreement between the North Carolina Highway Patrol (NCPD), VSP, and CPD (Chesapeake Police Department) that ensures that Route 168 will not be overwhelmed by evacuation traffic. The plan, when implemented upon the request of VSP, requires that the NCHP divert northbound Route 168 traffic onto westbound Route 158 (toward Elizabeth City). This action will allow the existing traffic queue on Route 168 to dissipate. The diversion will last 30 minutes followed by 30 minutes of normal northbound flow. The diversion will continue in this manner as long as necessary. The duration of diversion cycles may be adjusted upon the agreement of all three affected police agencies (NCHP, VSP, CPD). The primary objective of this agreement is to prevent gridlock on Route 168 and Interstate 64 (Battlefield Boulevard interchange).



- B. For the purpose of coordination, this Plan assumes that any ordered evacuation of local military bases will precede (or conform to) the timing and routing of the evacuated population of the area in which the base is located: ex. NAS Norfolk will evacuate with the City of Norfolk; Langley AFB will evacuate with Hampton (inland), etc. Accordingly, VDOT will work with affected state and federal agencies to communicate the tenets of this Plan.
- C. A traffic evacuation of the Hampton Roads area will be difficult. More than 27 hours will be needed to completely evacuate potential traffic volumes generated by the "at risk" population. In less severe storms, smaller populations (including tourists) or partial evacuations will be easier and may require less time. Nevertheless, the tenets of this plan will be in effect for smaller evacuations as well.
- D. Recognizing that it is likely minimum evacuation time may be available at best, approximately half of the "at risk" population might not be evacuated. In this case, there will come a point in time when Virginia State Police must terminate an evacuation effort. At this point, local emergency services coordinators should expect that motorists will seek refuge.
- E. The key to a successful evacuation is an educated and cooperative traveling public. VDOT will work in tandem with localities in coordinating the activities of this Plan.

Residents of Hampton Roads should know in advance:

1. that abandoned or stalled vehicles may be towed or pushed to clear evacuation routes and shoulders
2. that I-64 HOV/Reversible Roadway lanes will be closed to all but emergency vehicles (because their use in the evacuation will only create a bottleneck)
3. that access to the interstate at many "normal" entrances will be controlled to eliminate some merge lanes, thereby accelerating the overall flow of traffic
4. and, that, at some point prior to the arrival of sustained tropical storm force winds, the interstate will become more dangerous than most homes; thereafter, the principal evacuation focus will be to clear the routes and to simultaneously control access to them.

## **XII. Traffic Control**

### **A. General**

For the purpose of coordination, this Plan assumes that any ordered evacuation of local military bases will precede (or conform to) the timing and routing of the evacuated population of the area in which the base is located: ex. NAS Norfolk will evacuate with the City of Norfolk; Langley AFB will evacuate with Hampton (inland), etc. Accordingly, VDOT will work with affected state and federal agencies to communicate the tenets of this Plan.

VDOT's Safety Service Patrol and the VSP will be assigned to sections of the interstate system designated as evacuation routes and will be required to patrol sections of the interstate between interchanges in order to help immediately clear any disabled vehicles that may block the roadway or shoulder.

VSP will coordinate and implement all ramp metering with the assistance of VDOT personnel.

VDOT and the City of Suffolk will modify traffic signal timings of those signals on evacuation routes not under police control, in order to maximize traffic flow in the direction of evacuation. These traffic signals include, but are not limited to:

|                         |                            |
|-------------------------|----------------------------|
| Route 10/32/258         | Benn's Church              |
| Route 10/644            | Isle of Wight              |
| Route 10                | Smithfield Shopping Center |
| Route 10/10             | Business Smithfield        |
| Route 10/258            | Smithfield                 |
| Route 17/32/258/669     | Isle of Wight              |
| Route 17/135            | City of Suffolk            |
| Route 17/626            | City of Suffolk            |
| Route 17/744            | City of Suffolk            |
| Route 17/627            | City of Suffolk            |
| Route 17/628            | City of Suffolk            |
| Route 58/58 Business    | City of Suffolk            |
| Route 58 Business       | Holland Plaza              |
| Route 58/35             | Southampton County         |
| Route 58/58 Business    | Emporia                    |
| Route 60                | BASF                       |
| Route 143/199           | James City County          |
| Route 143/Tam-O-Shanter | James City County          |

All signals on Routes 17 and 134 in York County

All signals on Route 60 in James City County

All signals on Route 460 and 460 Business

All signals on Route 199 in James City and York Counties

## **B. Critical Roadway Sections**

### **1. Interstate 64**

Traffic will be metered onto I-64 in order to prevent over saturation of this most critical roadway (refer to Annex C for traffic control details).

#### **a. Tunnel Facilities**

##### **1. I-64/15<sup>th</sup> View Interchange – HRBT Control Room**

The ramp from Ocean View Avenue at 15th View Street to I-64 West will be closed to traffic by way of VSP and lowering of the traffic gate. Doing this will eliminate a merge point on I-64 and will help to maintain traffic flow.

##### **2. Coleman Bridge – York County**

The Coleman Bridge on-call wrecker service will be available to respond and assist in the maintenance of traffic flow at the facility.

The variable message sign (VMS) on Route 17 will be activated by STC with information to facilitate evacuating traffic over the Coleman Bridge.

The authority to lift tolls at the Coleman Bridge facility has been delegated to the Hampton Roads District Administrator; who will exercise this authority as deemed necessary.

**Due to wind restrictions, the Chesapeake Bay Bridge Tunnel is not a designated evacuation route.**

#### **b. Waverly Residency**

##### **1. Bartlett Area Headquarters**

Traffic control devices will be implemented to convert both lanes of the bridges across the Nansemond River and Chuckatuck Creek to northbound traffic on Route 17 in Suffolk. This will maintain capacity of Route 17 in the outbound direction.

Local law enforcement will direct traffic at the intersection of Route 17 and 258/32 at Bartlett. Local law enforcement will be required to maintain a dual right turn from Route 258/32 to Route 10 north at Benn's Church.

2. Smithfield Area

From the Route 10/258 business split to Route 258/Main Street west (Smithfield bypass), all traffic will move west on Route 10 in order to facilitate full use of the roadway for evacuating traffic.

c. Norfolk Residency

Bowers Hill Area Headquarters

I-664 North will be closed at Route 125 (Exit #9). All traffic will exit. Evacuation traffic will use Route 164 West (Western Freeway) to Route 17. Local traffic will use Route 17 North.

d. Williamsburg Residency

Seaford Area Headquarters

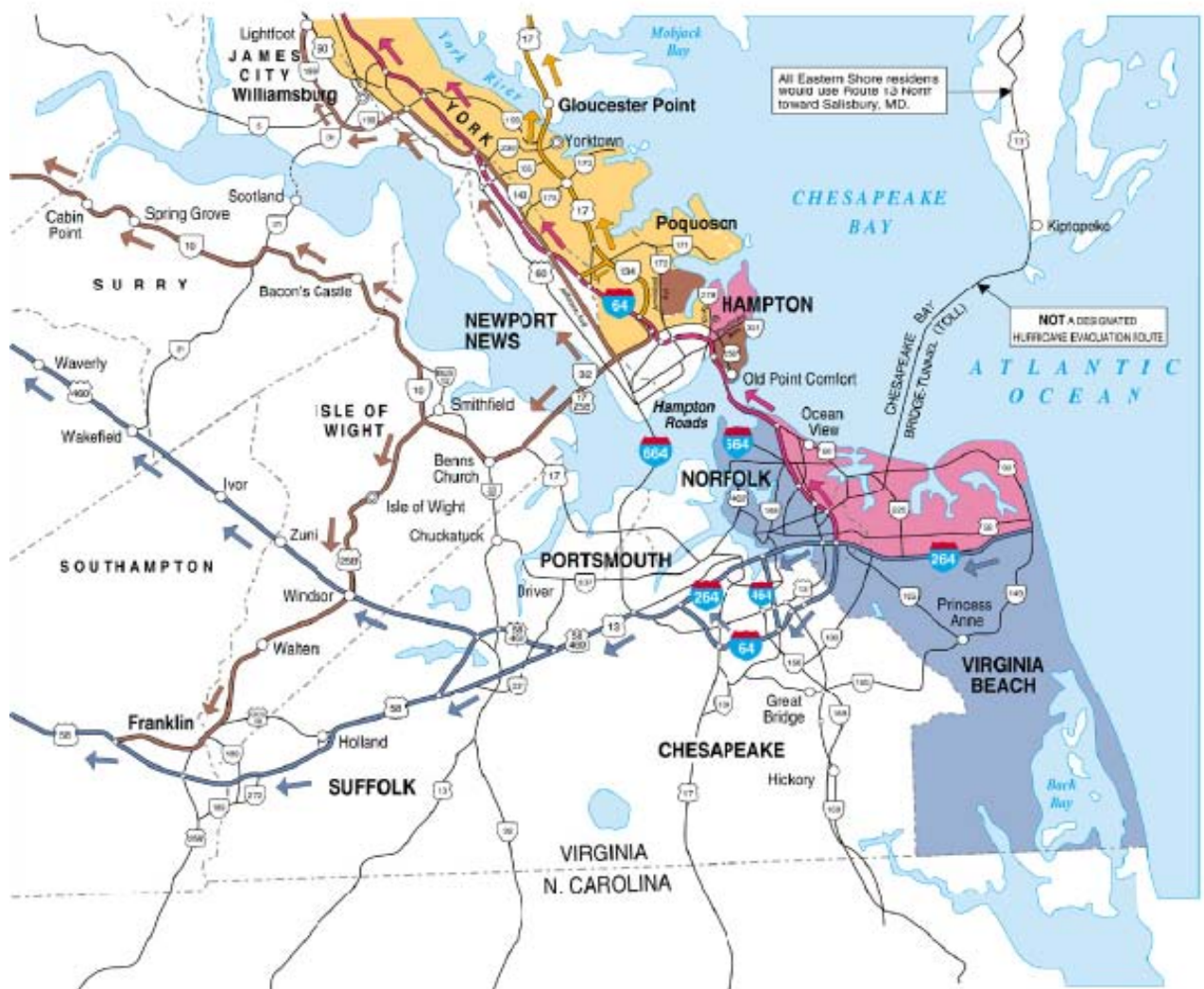
All evacuating traffic on Route 134 will divert to Route 17 north at the single lane ramp. Law enforcement presence will be required in order to facilitate the merge of this traffic (posted on Route 17 at the bottom of the ramp and on Route 134 at the merge point).



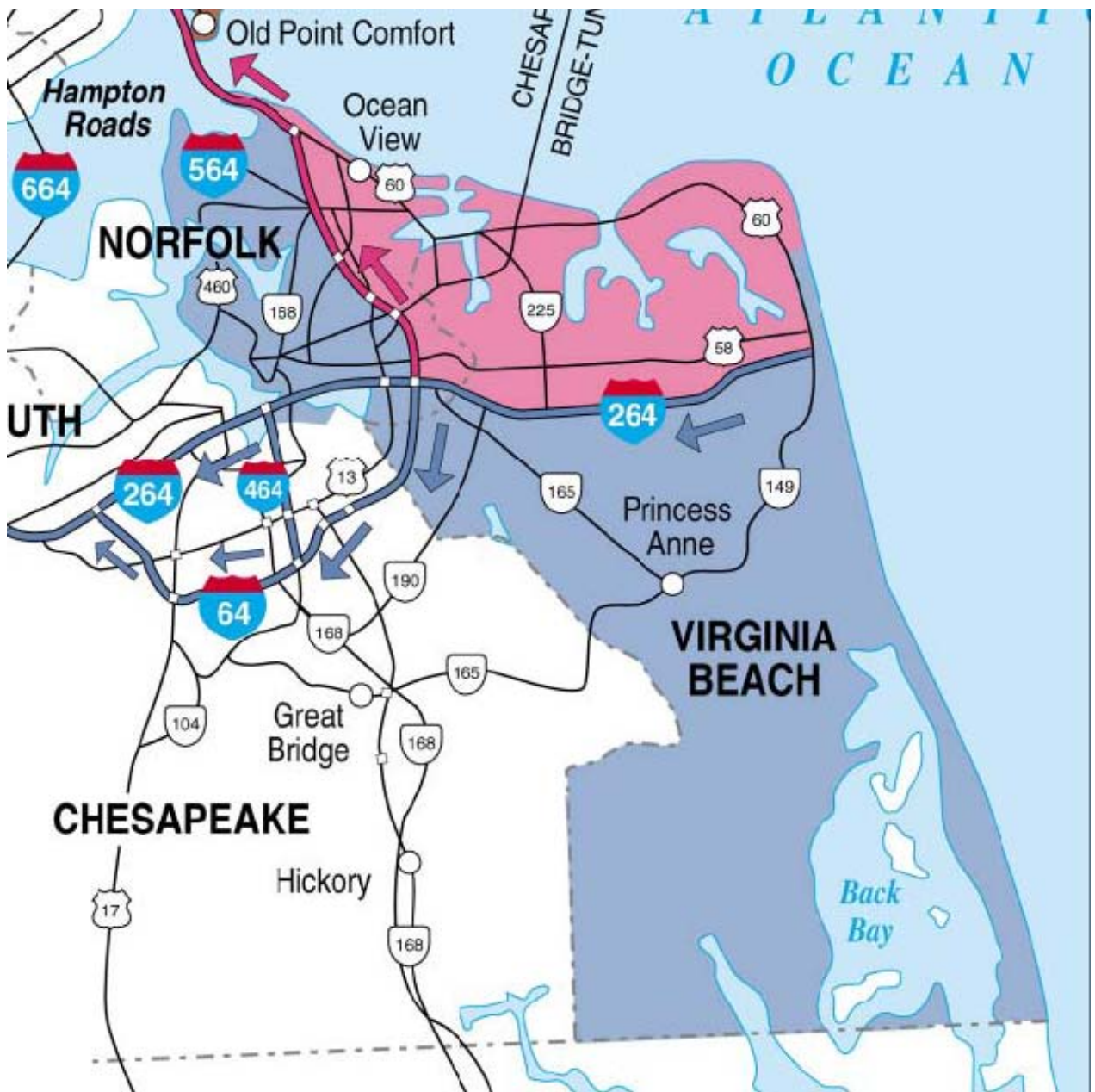
# ANNEX A

## PHASE ONE (Evacuation Routes)

## Phase One

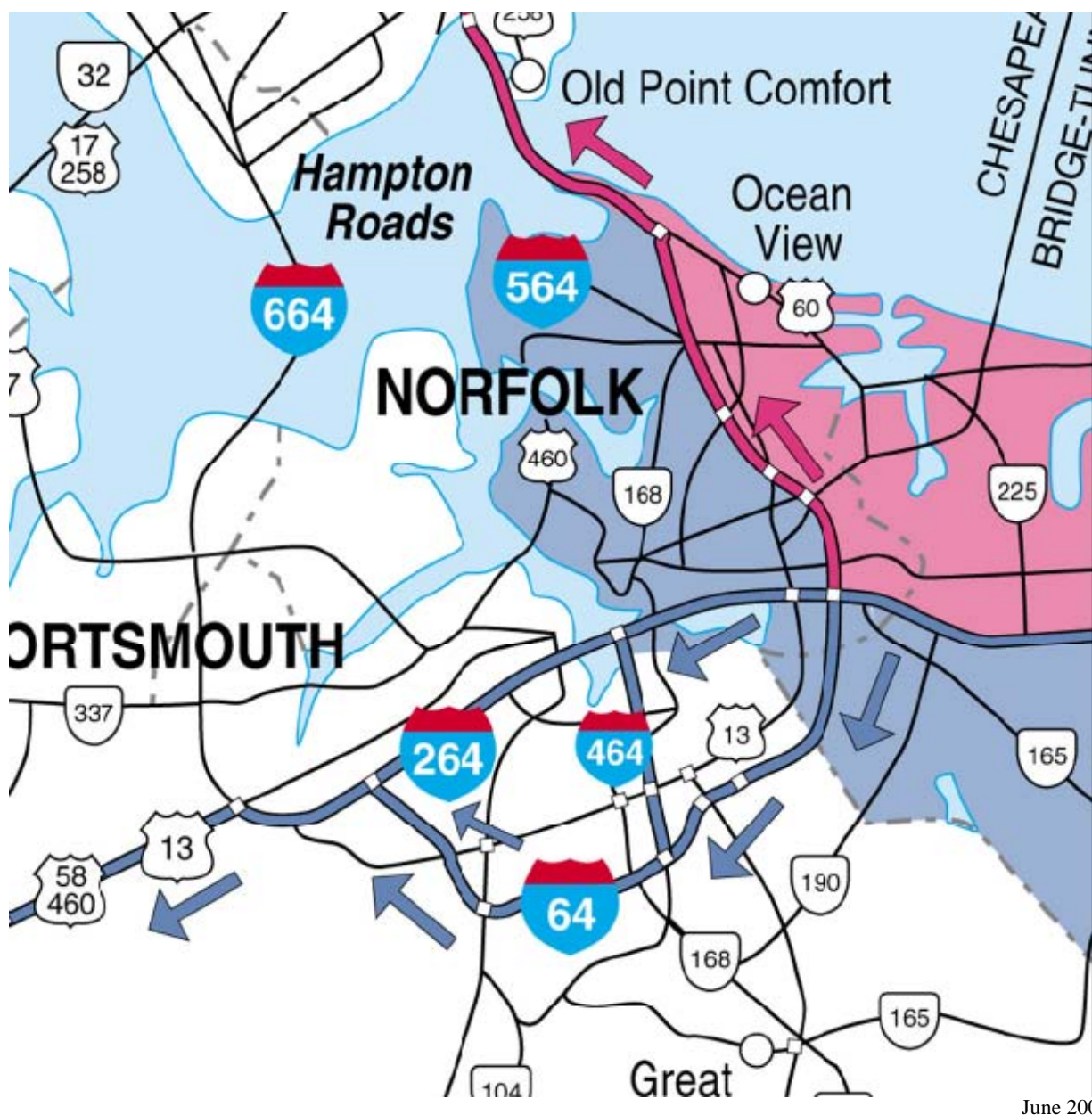


## Phase One – Virginia Beach

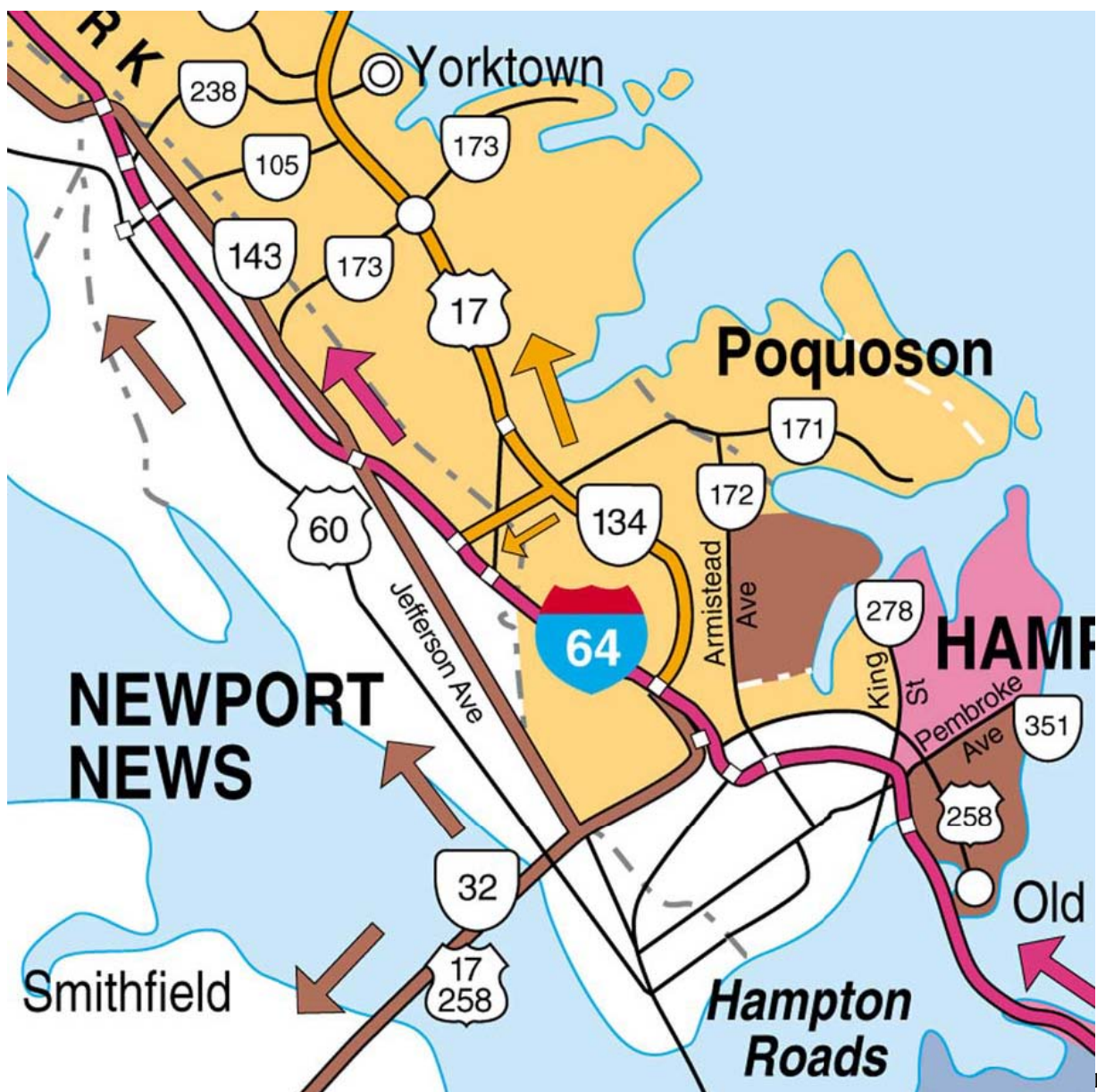




## Phase One – Norfolk



## Phase One – Peninsula (Hampton, York County & Poquoson)

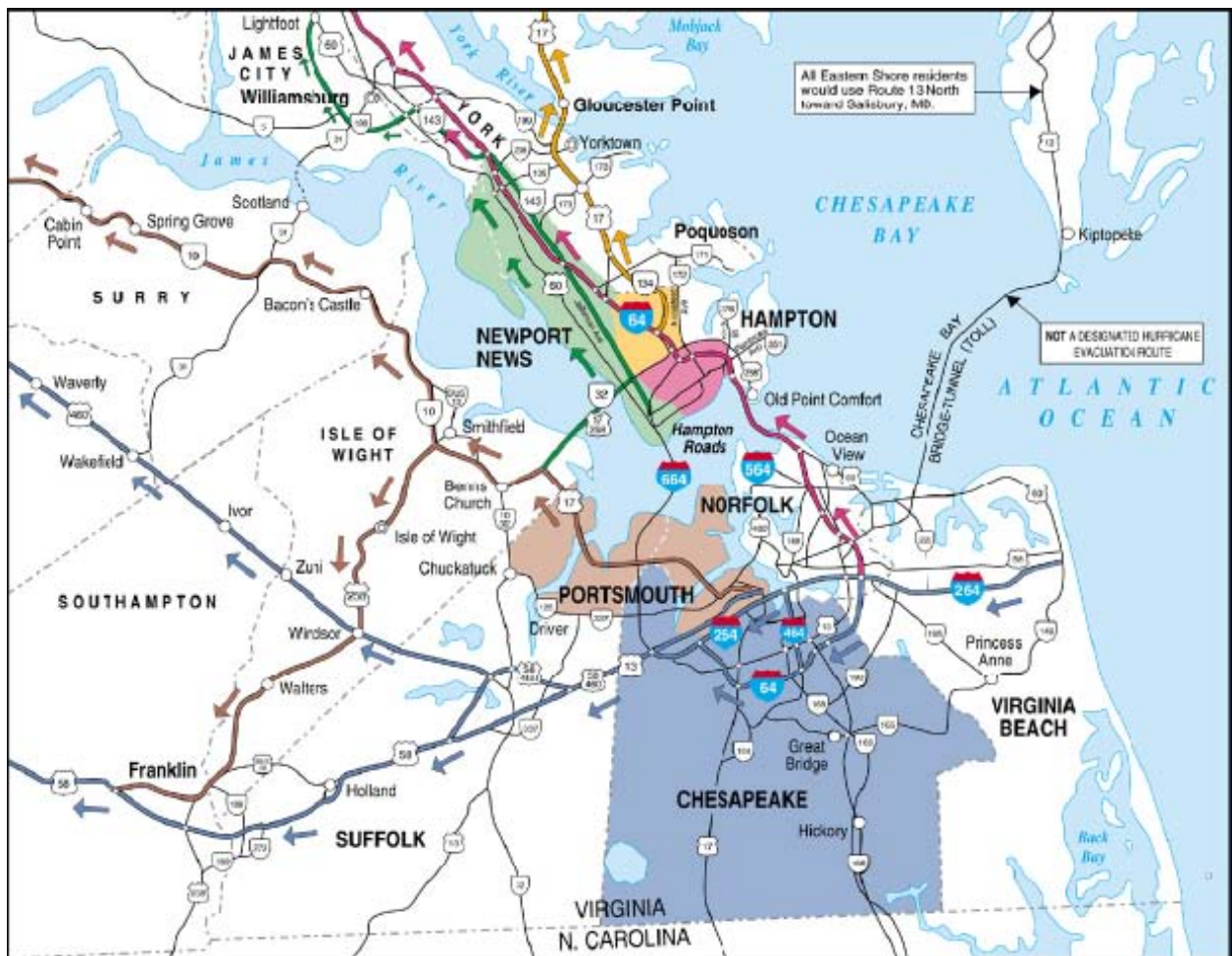


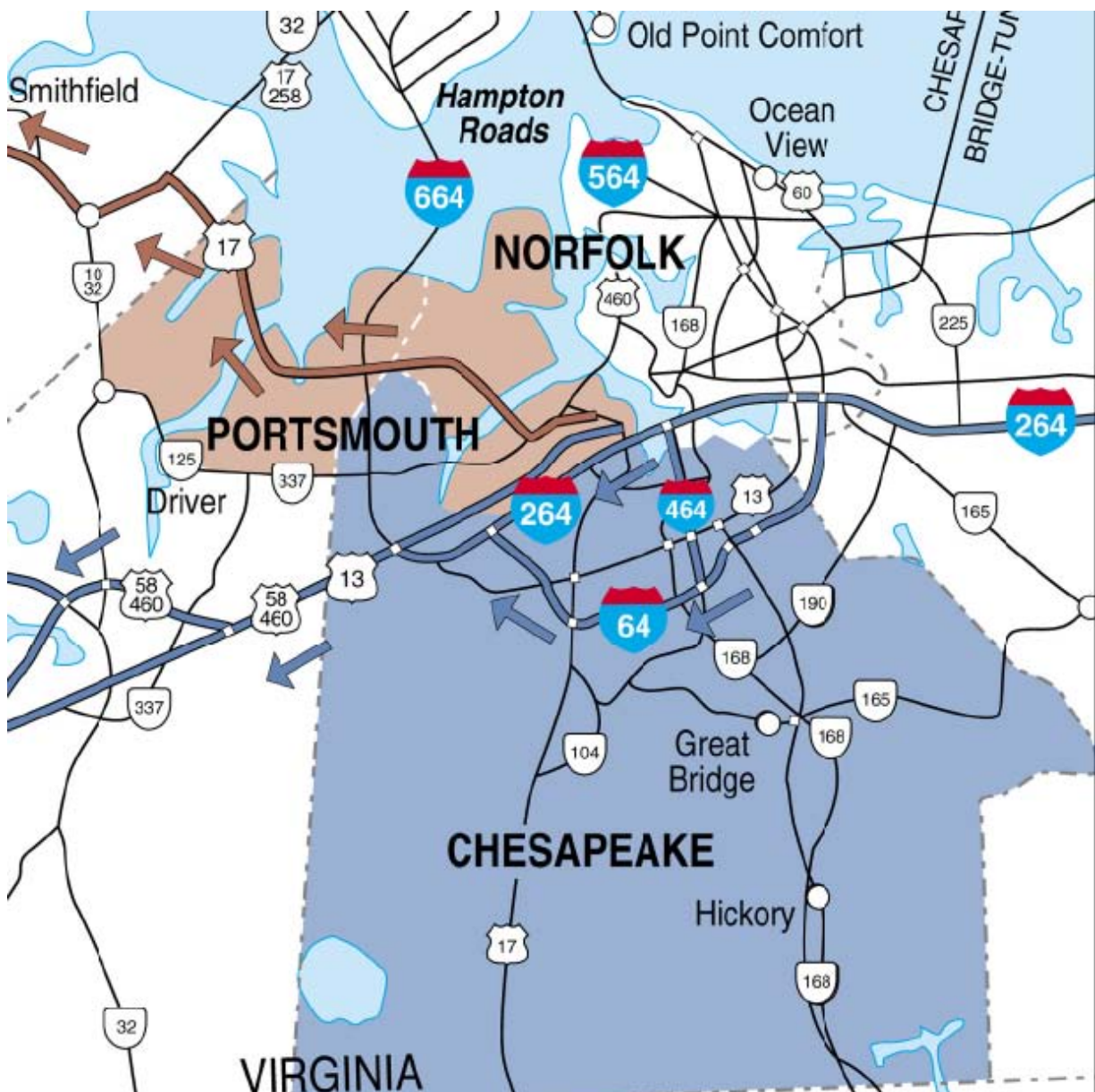
# ANNEX B

## PHASE TWO (Evacuation Routes)

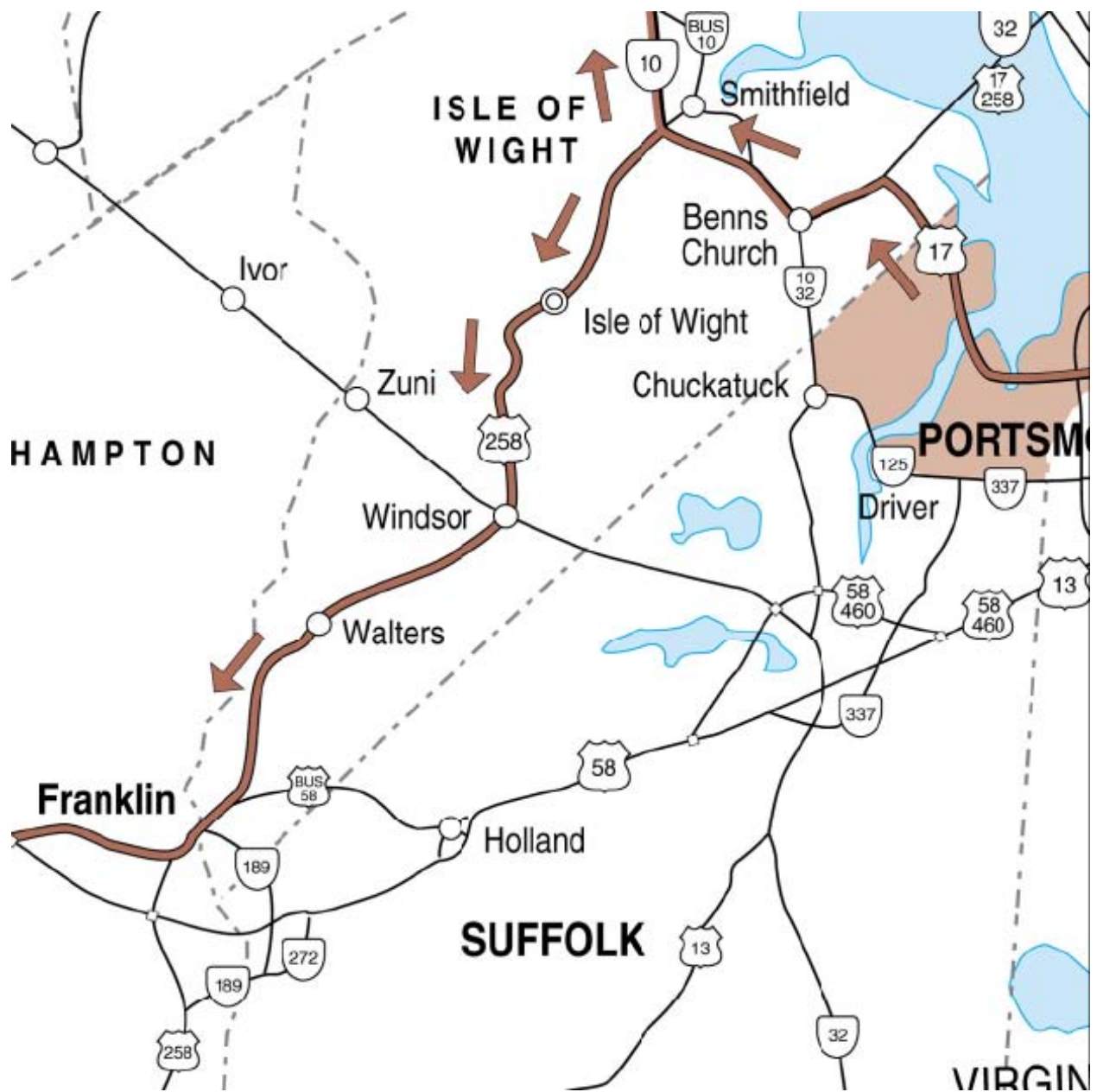


## Phase Two



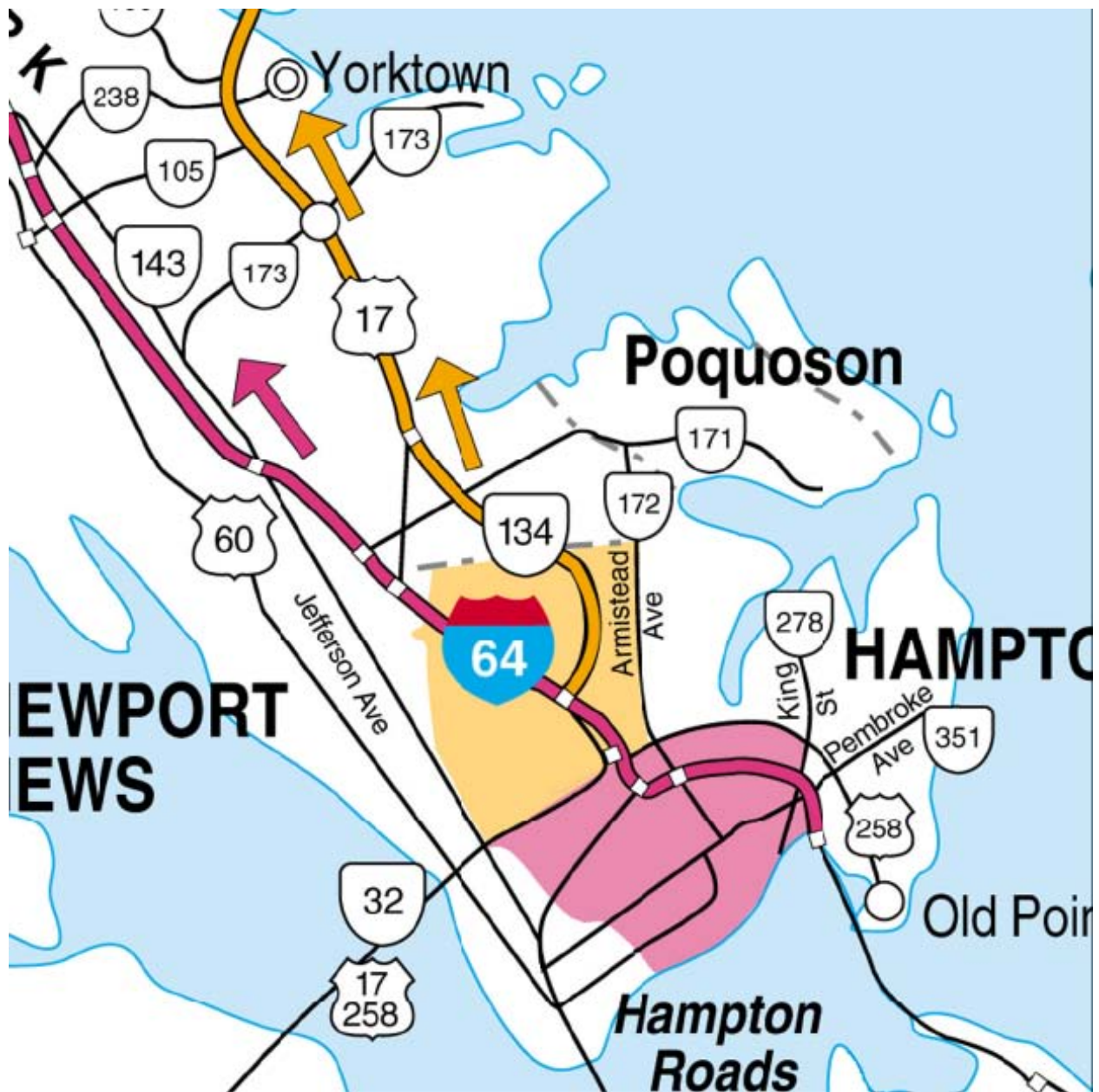


## Phase Two – Suffolk

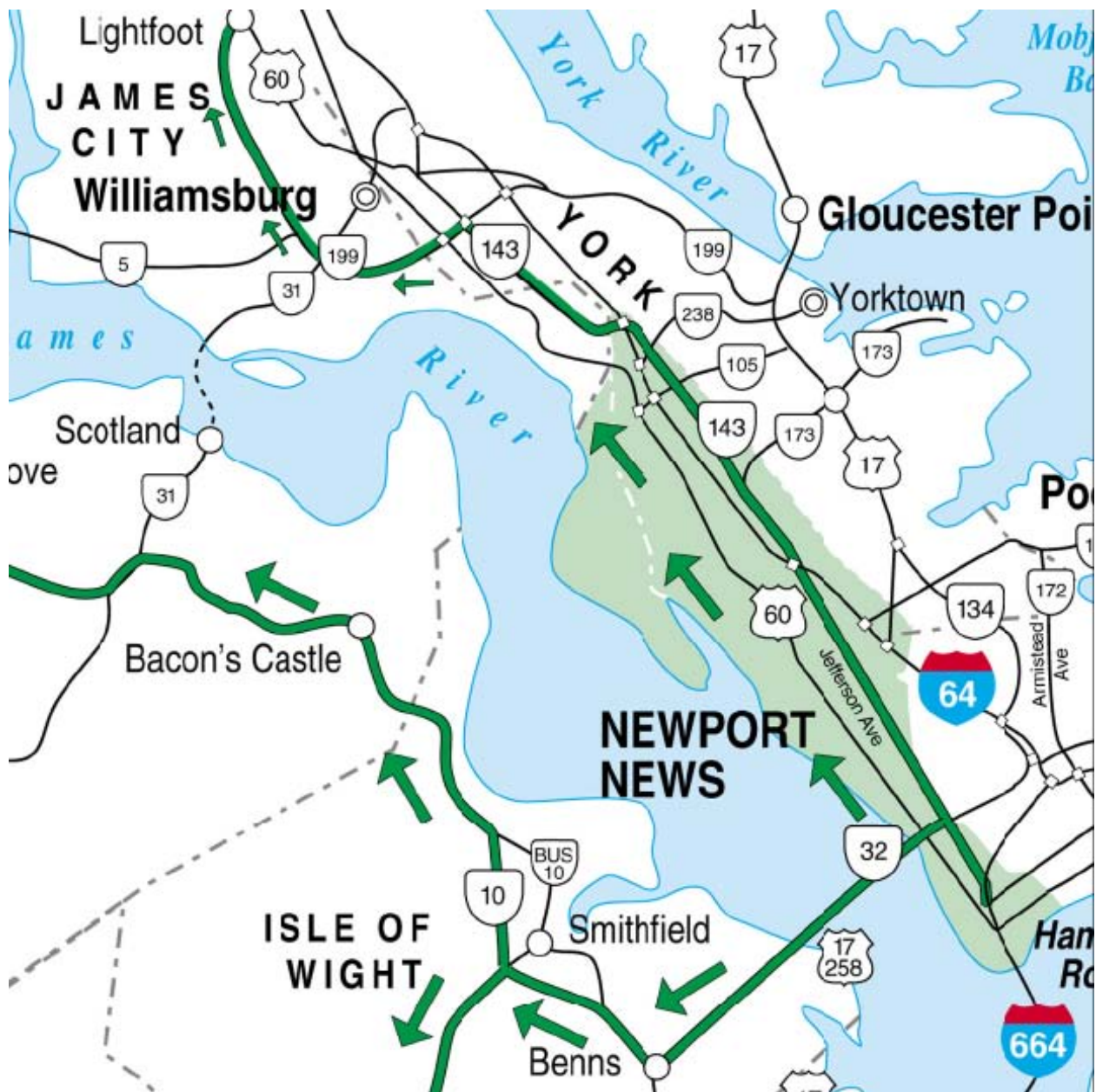




## Phase Two – Hampton



## Phase Two – Newport News





# ANNEX C

## Traffic Control Tables

## Interstate Metering Rates

| Interchange                  | Eastbound Ramps Open  |                     |                    |                        | Westbound Ramps Open |                        |                    |                     |
|------------------------------|-----------------------|---------------------|--------------------|------------------------|----------------------|------------------------|--------------------|---------------------|
|                              | Phase 1<br>Evacuation | Meter<br>Rate (vph) | Phase 2 Evacuation | Meter<br>Rate<br>(vph) | Phase 1 Evacuation   | Meter<br>Rate<br>(vph) | Phase 2 Evacuation | Meter Rate<br>(vph) |
| Bowers Hill                  | 0                     | 0                   | 0                  | 0                      | 0                    | 0                      | 0                  | 0                   |
| Military Hwy. South          | 0                     | 0                   | 0                  | 0                      | 0                    | 0                      | 0                  | 0                   |
| Geo. Washington Hwy.         | 1                     | 180                 | 2                  | 360                    | 0                    | 0                      | 0                  | 0                   |
| I-464                        | 1                     | 240                 | 2                  | 420                    | 0                    | 0                      | 0                  | 0                   |
| Battlefield Blvd.            | 1                     | 240                 | 2                  | 480                    | 0                    | 0                      | 0                  | 0                   |
| Greenbrier Pkwy.             | 0                     | 0                   | 2                  | 360                    | 0                    | 0                      | 0                  | 0                   |
| Indian River Road            | 2                     | 240                 | 2                  | 180                    | 0                    | 0                      | 0                  | 0                   |
| I-264                        | 2                     | 900                 | 2                  | 900                    | 1                    | 240                    | 1                  | 240                 |
| Northampton Blvd.            | 1                     | 300                 | 0                  | 0                      | 1                    | 480                    | 1                  | 480                 |
| Military Hwy. North          | 0                     | 0                   | 0                  | 0                      | 0                    | 0                      | 0                  | 0                   |
| Norview Avenue               | 1                     | 360                 | 1                  | 360                    | 1                    | 480                    | 1                  | 200                 |
| Chesapeake Blvd.             | 0                     | 0                   | 0                  | 0                      | 0                    | 0                      | 0                  | 0                   |
| Tidewater Drive              | 1                     | 360                 | 1                  | 180                    | 1                    | 300                    | 1                  | 360                 |
| I-564                        | 2                     | 480                 | 1                  | 360                    | 0                    | 0                      | 0                  | 0                   |
| Granby Street                | 0                     | 0                   | 0                  | 0                      | 1                    | 240                    | 1                  | 360                 |
| Bay Avenue                   | 1                     | 180                 | 0                  | 0                      | 0                    | 0                      | 0                  | 0                   |
| 4 <sup>th</sup> View Street  | 1                     | 180                 | 1                  | 180                    | 1                    | 420                    | 1                  | 360                 |
| 15 <sup>th</sup> View Street | 1                     | 0                   | 1                  | 0                      | 0                    | 0                      | 0                  | 0                   |
| Mallory Street               | 0                     | 0                   | 0                  | 0                      | 0                    | 0                      | 0                  | 0                   |
| County Street                | 0                     | 0                   | 0                  | 0                      | 0                    | 0                      | 0                  | 0                   |
| LaSalle Avenue               | 0                     | 0                   | 0                  | 0                      | 1                    | 420                    | 1                  | 300                 |
| I-664                        | 0                     | 0                   | 0                  | 0                      | 1                    | 300                    | 1                  | 600                 |
| Mercury Blvd.                | 0                     | 0                   | 0                  | 0                      | 1                    | 420                    | 2                  | 480                 |
| Hampton Roads Ctr. Pkwy.     | 0                     | 0                   | 0                  | 0                      | 0                    | 0                      | 0                  | 420                 |
| J. Clyde Morris Blvd.        | 0                     | 0                   | 0                  | 0                      | 0                    | 0                      | 0                  | 0                   |
| Victory Blvd.                | 0                     | 0                   | 0                  | 0                      | 1                    | 120                    | 1                  | 120                 |
| Jefferson Avenue             | 0                     | 0                   | 0                  | 0                      | 0                    | 0                      | 0                  | 0                   |
| Ft. Eustis Blvd.             | 0                     | 0                   | 0                  | 0                      | 0                    | 0                      | 0                  | 0                   |
| <b>TOTALS:</b>               | <b>15</b>             | <b>3660</b>         | <b>17</b>          | <b>3780</b>            | <b>10</b>            | <b>3420</b>            | <b>11</b>          | <b>3740</b>         |

**Phase One - Table 1**  
required manpower for 12 hour shifts

| Exit        | VDOT | VaARNG | VSP | Exit Total |
|-------------|------|--------|-----|------------|
| 16          | 0    | 0      | 0   | 0          |
| 297         | 2    | 0      | 2   | 4          |
| 296         | 2    | 0      | 2   | 4          |
| 291         | 5    | 0      | 5   | 10         |
| 290         | 4    | 0      | 3   | 7          |
| 289         | 4    | 0      | 3   | 7          |
| 286         | 8    | 0      | 8   | 16         |
| 284         | 7    | 0      | 6   | 13         |
| 282         | 3    | 0      | 3   | 6          |
| 281         | 2    | 0      | 2   | 4          |
| 279         | 4    | 0      | 4   | 8          |
| 278         | 4    | 0      | 3   | 7          |
| 277         | 6    | 0      | 6   | 12         |
| 276         | 3    | 0      | 4   | 7          |
| New Gate    | 2    | 0      | 4   | 6          |
| 274         | 1    | 0      | 2   | 3          |
| 273         | 2    | 0      | 4   | 6          |
| 272         | 1    | 0      | 2   | 3          |
| 268         | 4    | 0      | 3   | 7          |
| 267         | 4    | 0      | 3   | 7          |
| 265         | 5    | 0      | 5   | 10         |
| 264         | 5    | 0      | 5   | 10         |
| 263         | 3    | 0      | 4   | 7          |
| 262         | 0    | 0      | 0   | 0          |
| 261         | 4    | 0      | 3   | 7          |
| 258         | 4    | 0      | 3   | 7          |
| 256         | 2    | 0      | 4   | 6          |
| 255         | 3    | 0      | 3   | 6          |
| 250         | 4    | 0      | 3   | 7          |
| 247 A.      | 2    | 0      | 2   | 4          |
| 247 B.      | 0    | 0      | 0   | 0          |
| 243         | 0    | 0      | 0   | 0          |
| 242         | 4    | 0      | 3   | 7          |
| 238         | 8    | 0      | 5   | 13         |
| 234         | 0    | 0      | 0   | 0          |
| Rt. 199/143 | 0    | 0      | 0   | 0          |
| Rt. 199/60  | 0    | 0      | 0   | 0          |
| 9           | 0    | 0      | 0   | 0          |
| 8           | 7    | 0      | 4   | 11         |
|             |      |        |     |            |
| Total       | 119  | 0      | 113 | 232        |

**Phase Two – Table 2**  
required manpower for 12 hour shifts

| Exit         | VDOT       | VaARNG   | VSP        | Exit Total |
|--------------|------------|----------|------------|------------|
| 16           | 0          | 0        | 0          | 0          |
| 297          | 2          | 0        | 2          | 4          |
| 296          | 2          | 0        | 4          | 6          |
| 291          | 2          | 0        | 2          | 4          |
| 290          | 4          | 0        | 6          | 10         |
| 289          | 3          | 0        | 4          | 7          |
| 286          | 8          | 0        | 8          | 16         |
| 284          | 7          | 0        | 6          | 13         |
| 282          | 3          | 0        | 3          | 6          |
| 281          | 2          | 0        | 2          | 4          |
| 279          | 4          | 0        | 4          | 8          |
| 278          | 4          | 0        | 3          | 7          |
| 277          | 6          | 0        | 6          | 12         |
| 276          | 3          | 0        | 4          | 7          |
| New Gate     | 2          | 0        | 4          | 6          |
| 274          | 1          | 0        | 2          | 3          |
| 273          | 2          | 0        | 4          | 6          |
| 272          | 1          | 0        | 2          | 3          |
| 268          | 4          | 0        | 3          | 7          |
| 267          | 4          | 0        | 3          | 7          |
| 265          | 5          | 0        | 5          | 10         |
| 264          | 5          | 0        | 5          | 10         |
| 263          | 2          | 0        | 4          | 6          |
| 262          | 0          | 0        | 0          | 0          |
| 261          | 4          | 0        | 3          | 7          |
| 258          | 4          | 0        | 3          | 7          |
| 256          | 2          | 0        | 4          | 6          |
| 255          | 3          | 0        | 3          | 6          |
| 250          | 4          | 0        | 3          | 7          |
| 247 A.       | 2          | 0        | 2          | 4          |
| 247 B.       | 0          | 0        | 0          | 0          |
| 243          | 0          | 0        | 0          | 0          |
| 242          | 4          | 0        | 3          | 7          |
| 238          | 8          | 0        | 5          | 13         |
| 234          | 0          | 0        | 0          | 0          |
| Rt. 199/143  | 6          | 0        | 4          | 10         |
| Rt. 199/60   | 1          | 0        | 2          | 3          |
| 9            | 3          | 0        | 2          | 5          |
| 8            | 7          | 0        | 4          | 11         |
|              |            |          |            |            |
| <b>Total</b> | <b>124</b> | <b>0</b> | <b>124</b> | <b>248</b> |

**Reversal Phase – Table 3**  
required manpower for 12 hour shifts

| Exit         | VDOT | VaARNG | VSP | Exit Total |
|--------------|------|--------|-----|------------|
| 273          | 5    | 5      | 6   | 16         |
| 272          | 2    | 0      | 3   | 5          |
| 268          | 6    | 6      | 3   | 15         |
| 267          | 6    | 5      | 3   | 14         |
| 265          | 12   | 10     | 6   | 28         |
| 264          | 7    | 4      | 3   | 14         |
| 263          | 9    | 6      | 4   | 19         |
| 262          | 3    | 2      | 2   | 7          |
| 261          | 9    | 6      | 5   | 20         |
| 258          | 12   | 9      | 7   | 28         |
| 256          | 12   | 8      | 5   | 25         |
| 255          | 12   | 8      | 6   | 26         |
| 250          | 12   | 8      | 5   | 25         |
| 247 A.       | 3    | 2      | 2   | 7          |
| 247 B.       | 6    | 4      | 3   | 13         |
| 243          | 9    | 6      | 4   | 19         |
| 242          | 12   | 8      | 5   | 25         |
| 238          | 6    | 6      | 3   | 15         |
| 234          | 3    | 2      | 6   | 11         |
| 231          | 12   | 8      | 5   | 25         |
| 227          | 9    | 7      | 4   | 20         |
| 220          | 6    | 8      | 5   | 19         |
| 214          | 6    | 4      | 3   | 13         |
| 211          | 6    | 4      | 3   | 13         |
| 205          | 6    | 5      | 3   | 14         |
| 200          | 11   | 10     | 11  | 32         |
| 9            | 3    | 2      | 2   | 7          |
| 8            | 7    | 4      | 4   | 15         |
|              |      |        |     |            |
| <b>Total</b> | 212  | 157    | 121 | 490        |